

ABSTRACT OF THE INVENTION

The invention provides a gene targeting construct containing a transgene encoding a polypeptide that contains a rod outer segment (ROS) targeting signal.

5 The transgene is flanked by 5' and 3' DNA sequences that
are homologous to the rhodopsin gene. Homologous
recombination between the construct and a rhodopsin gene
results in operable association between the transgene and
a rod-specific regulatory sequence. The invention also
10 provides cells and animals whose genome contain a
functional disruption of one or both endogenous rhodopsin
gene alleles, and a transgene encoding a polypeptide that
contains a ROS targeting signal operably associated with
a rod-specific regulatory sequence. The invention
15 constructs, cell and animals can be used to isolate
transgenic polypeptides from the ROS membrane.